DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	SPAULDING POND	Lake Area (ha):	20.23
Town:	MILTON	Maximum depth (m):	6.7
County:	Strafford	Mean depth (m):	2.2
River Basin:	Coastal	Volume (m^3):	445000
Latitude:	43°23'08" N	Relative depth:	1.3
Longitude:	70°59'09" W	Shore configuration:	2.95
Elevation (ft):	247	Areal water load (m/yr):	819.0
Shore length (m):	4700	Flushing rate (yr^{-1}):	372.0
Watershed area (ha):	32616.2	P retention coeff.:	< 0.01
% watershed ponded:	4.1	Lake type:	artificial

BIOLOGICAL:		7 February 1996	14 September 1995
DOM. PHYTOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	CHRYSOSPHAERELLA 60%
	#2		MELOSIRA 18%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.18
DOM. ZOOPLANKTON (% TOTAL)	#1	NO ZOOPLANKTON	NAUPLIUS LARVA 39%
	#2	OBSERVED	KERATELLA 24%
	#3		
ROTIFERS/LITER		<1	38
MICROCRUSTACEA/LITER		<1	77
ZOOPLANKTON ABUNDANCE (#/L)		<1	119
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			5.2
BOTTOM DISSOLVED OXYGEN (mg/L)		15.5	2.0
BACTERIA (E. coli, #/100 ml)	#1		3
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL:

Lake: SPAULDING POND
Town: MILTON

	7 February 1996		14 September 1995		
DEPTH (m)	1.5	3.0	2.0		5.0
pH (units)	6.1	6.2	7.0		6.9
A.N.C. (Alkalinity)	4.7	5.0	8.6		9.2
NITRATE NITROGEN	0.07	0.07	0.11		0.11
TOTAL KJELDAHL NITROGEN	0.10	0.10	0.22		0.24
TOTAL PHOSPHORUS	0.010	0.010	0.008		0.008
CONDUCTIVITY (µmhos/cm)	64.2	62.9	81.0		80.7
APPARENT COLOR (cpu)	50	49	37		42
MAGNESIUM			0.86		
CALCIUM			4.2		
SODIUM			9.5		
POTASSIUM			0.71		
CHLORIDE	12	12	17		16
SULFATE			5		5
TN : TP	17	17	41		44
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1995

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	1	3	0	4	Oligo.

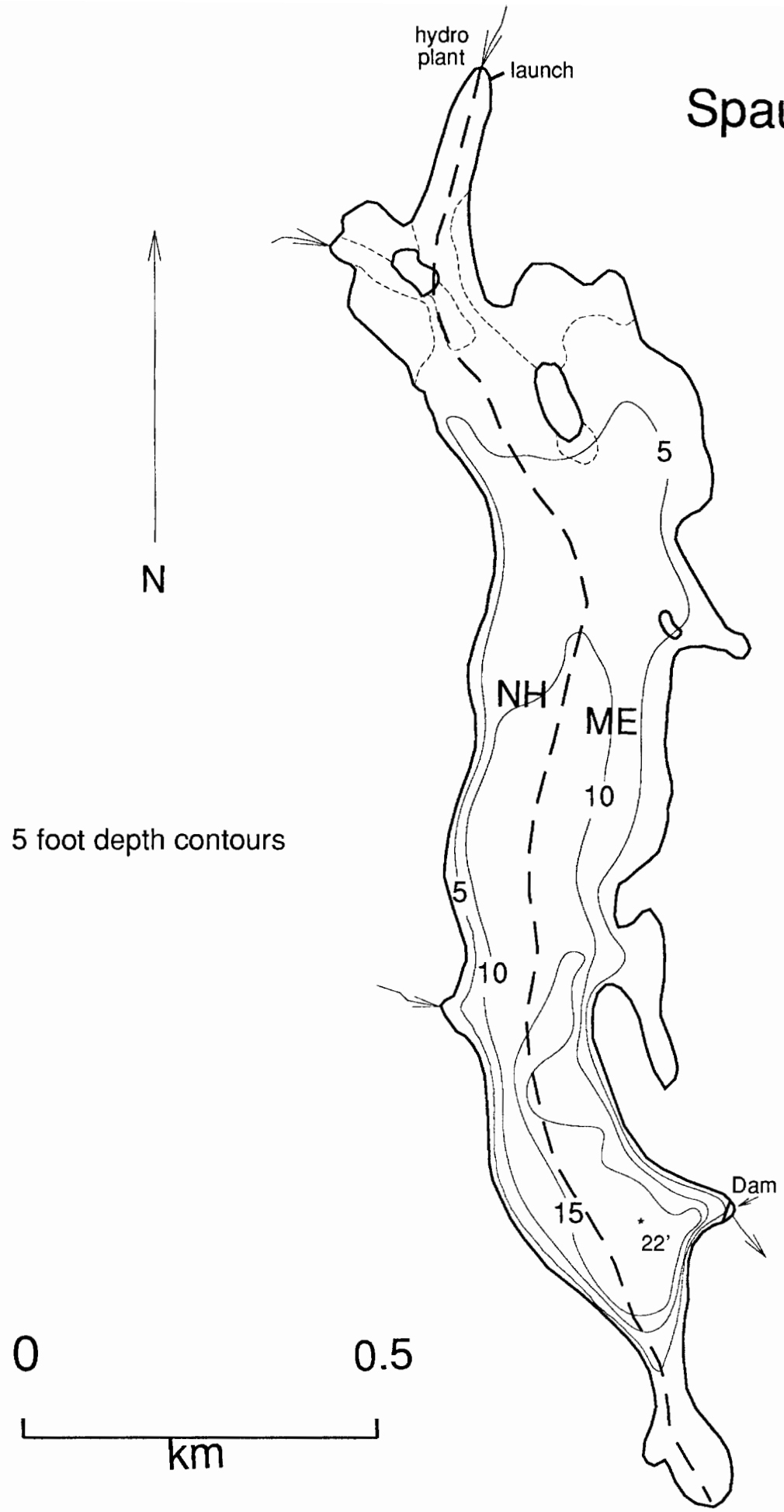
COMMENTS:

1. This pond was previously surveyed and classified in 1980. It received one less trophic point in 1995, which moved it from mesotrophic to oligotrophic. Chlorophyll was less and water clarity was greater in 1995.

2. This is an impoundment of the Salmon Falls River at Spaulding Fibre Company.

3. Access to the pond was at the northern end adjacent to Milton hydroelectric plant.

4. Densest development was along the Maine (eastern) shore, with many beaches and docks.


Spaulding Pond
Milton
hydro plant
launch
N
5
NH
ME
10
5 foot depth contours
5
10
Dam
15
22'
0
0.5
km

FIELD DATA SHEET

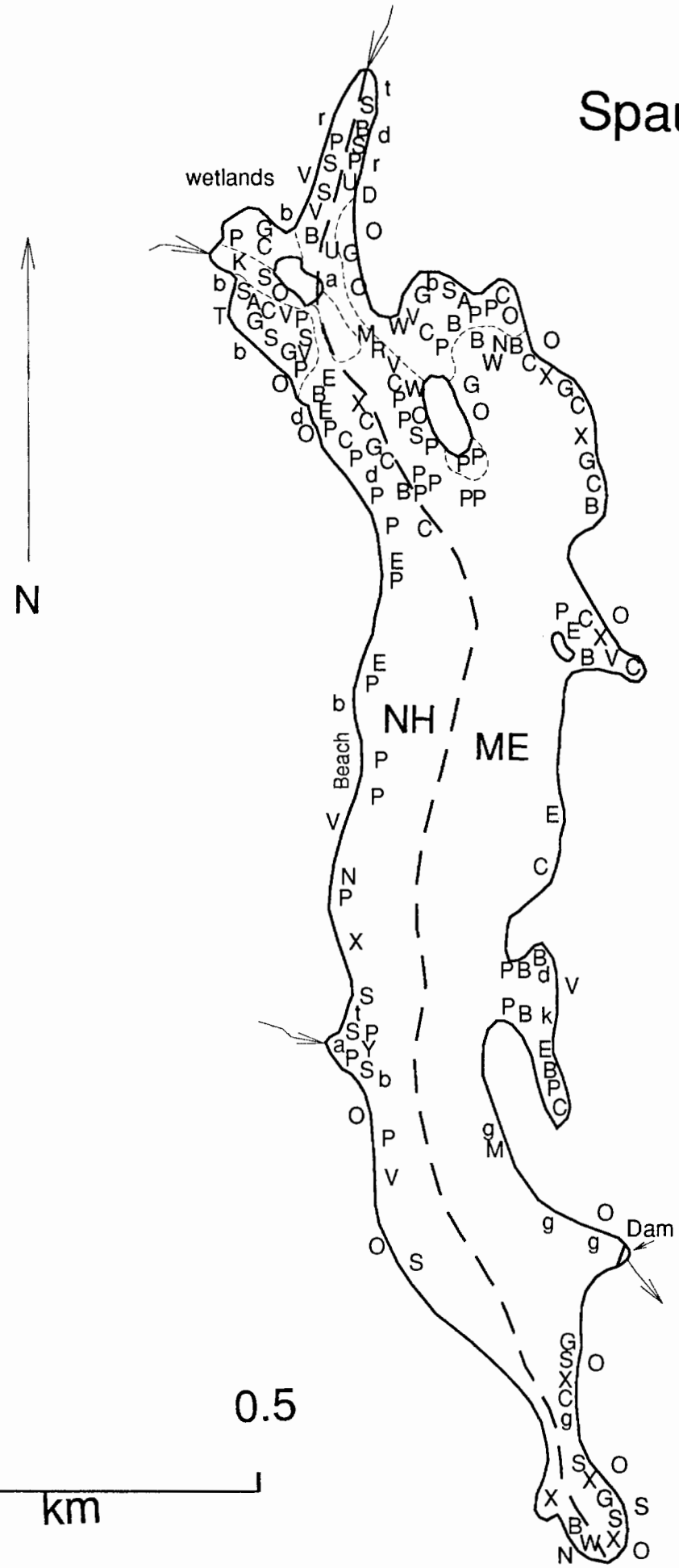
LAKE: SPAULDING POND TOWN: MILTON
DATE: 09/14/95 WEATHER: SUNNY & WARM

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	20.0	8.0	88 %
	1.0	19.3	8.0	86 %
	2.0	19.3	7.9	84 %
	3.0	19.3	7.9	84 %
	4.0	19.3	7.9	84 %
	5.0	19.0	7.0	75 %
	6.0	19.5	6.2	67 %
	6.5	19.0	2.0	22 %

SECCHI DISK (m): 5.2 COMMENTS:
BOTTOM DEPTH (m): 6.7
TIME: 1300

*Dissolved oxygen values are in mg/L

Spaulding Pond
Milton



AQUATIC PLANT SURVEY

LAKE: SPAULDING POND TOWN: MILTON DATE: 09/14/95

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
S	Sparganium	Bur reed	Common
P	Pontederia cordata	Pickerelweed	Common/Abun
C	Cyperaceae	non-flowering sedge	Common
a	Potamogeton amplifolius	Bass weed	Sparse
R	Potamogeton robbinsii	Robbins pondweed	Sparse
V	Scirpus validus	Softstem bulrush	Scattered
U	Utricularia	Bladderwort	Sparse
G	Gramineae	Grass family	Common
O	Cephalanthus occidentalis	Buttonbush	Common
B	Brasenia schreberi	Water shield	Common
E	Eriocaulon septangulare	Pipewort	Scattered
N	Nymphaea	White water lily	Sparse
Y	Nuphar	Yellow water lily	Sparse
M	Megalodonta Beckii	Water marigold	Sparse
X		Sterile thread-like leaf	Scattered
d	Dulichium arundinaceum	Three-way sedge	Scattered
k	Nymphaea	Pink water lily	Sparse
L	Lobelia cardinalis	Cardinal flower	Sparse
g	Gentiana	Gentian	Sparse
W	Potamogeton	Pondweed	Scattered
t	Chelone	Turtlehead	Sparse
b	Scirpus	Bulrush	Scattered
T	Typha	Cattail	Sparse
A	Sagittaria	Arrowhead	Sparse
D	Decodon verticillatus	Swamp loosestrife	Sparse
r	Carex	Sedge	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Northern quarter of the pond is a wetland with two shallow but navigable channels.
2. Sponges and filamentous algae were present throughout the pond and bryozoans were observed in the northern wetland area.
3. Plants were common around most of the shoreline and abundant in many small coves and in the northern 1/4 of the pond, but the plants did not hinder navigation in the main pond.
4. An unidentified *Ludwigia*-like plant was observed in the northern wetland and is denoted as 'K' on the map.